

DOCKET NO.: WARF-0235/P03170US

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

John P. Helgeson, et al.

Confirmation No.: 3588

Application No.: 10/755,966

Group Art Unit: 1645

Filing Date: January 12, 2004

Examiner: Not Yet Assigned

For: POTATO GENES FOR RESISTANCE TO LATE BLIGHT

DATE OF DEPOSIT: *January 28, 2005*

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

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Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or
- ☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of reference numbers **1 – 27 and 30 - 32** listed on the attached Form PTO-1449 are enclosed herewith.

- ☒ Copies of reference numbers **28 and 29** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

- ☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.

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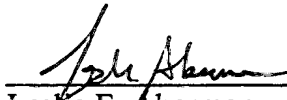
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☐ The relevance of those listed references which are not in the English language is as follows:

There are no listed references which are not in the English language.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

Date: Jan 27, 2005



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Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. WARF-0235/ PO3170US	Application No. 10/755,966
	Applicant John P. Helgeson, et al.	
	Filing Date January 12, 2004	Group 1645
	Confirmation No. 3588	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1	Anderson, P.A., et al., "Inactivation of the flax rust resistance gene <i>M</i> associated with loss of a repeated unit within the leucine-rich repeat coding region," <i>The Plant Cell</i> , 1997 , 9, 641-651
2	Ballvora, A., et al., "The <i>RI</i> gene for potato resistance to late blight (phytophthora infestans) belongs to the leucine zipper/NBS/LRR class of plant resistance genes," <i>The Plant Journal</i> , 2002 , 30(3), 361-371
3	Bent, A.F., et al., " <i>RPS2</i> of <i>Arabidopsis thaliana</i> : A leucine-rich repeat class of plant disease resistance genes," <i>Science</i> , 1994 , 265, 1856-1860
4	Black, W., et al., "Screening of solanum species for resistance to physiologic races of phytophthora infestans," <i>Am. Potato J.</i> , 1957 , 34, 273-281
5	Cearley, J.A., "Regeneration of <i>solanum tuberosum</i> CV. Katahdin from leaf explants <i>in vitro</i> ," <i>Am. Pot. J.</i> , 1997 , 74, 125-129
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8	Helgeson, J.P., et al., "Somatic hybrids between <i>Solanum bulbocastanum</i> and potato: a new source of resistance to late blight," <i>Theor. Appl. Genet.</i> , 1998 , 96, 738-742
9	Jansky, S., "Breeding for disease resistance in potato," <i>Plant Breed Rev.</i> , 2000 , 19, 69-155
10	Jones, J.D.G., et al., "Effective vectors for transformation, expression of heterologous genes, and assaying transposon excision in transgenic plants," <i>Transgenic Res.</i> , 1992 , 1, 285-297

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	11	Kamoun, S., "Nonhost resistance to <i>phytophthora</i> : novel prospects for a classical problem," <i>Curr. Opin. Plant Biol.</i> , 2001 , 4, 295-300	
	12	Kuhl, J.C., et al., "Characterization and mapping of <i>Rpi1</i> , a late-blight resistance locus from diploid (1EBN) Mexican <i>Solanum pinnatisectum</i> ," <i>Mol. Genet Genomics</i> , 2001 , 265, 977-985	
	13	Malcolmson, J.F., et al., "New R genes in <i>Solanum demissum</i> lindl. And their complementary races of <i>phytophthora infestans</i> (Mont.) de bary," <i>Euphytica</i> , 1966 , 15, 199-203	
	14	McGrath, J.M., et al., "Recombination of <i>Solanum brevidens</i> chromosomes in the second backcross generation from a somatic hybrid with <i>S. tuberosum</i> ," <i>Theor. Appl. Genet.</i> , 1994 , 88, 917-924	
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	21	Song, J., et al., "Gene RB cloned from solanum bulbocastanum confers broad spectrum resistance to potato late blight," <i>PNAS</i> , 2003 , <i>101</i> (16), 9128-9133 (abstract); GenBank Nos. AY303170, 30 pages and AY303171, 60 pages
	22	Toxopeus, H.J., "Reflections on the origin of new physiologic races in phytophthora infestans and the breeding for resistance in potatoes," <i>Euphytica</i> , 1956 , <i>5</i> (3), 221-356
	23	Umaerus, V., et al., "Inheritance of resistance to late blight," <i>Potato Genetics, CAB International</i> , Wallingford, UK, 1994 , 365-401
	24	Van der Vossen, E., et al., "Cloning of an <i>R</i> gene from Solanum bulbocastanum conferring complete resistance to Phytophthora infestans (abs)," <i>Plant Research International</i> , 2002 , 1 page (Abstract from Global Initiative on Late Blight Conference: Late blight: Managing the Global Threat, Hamburg, Germany)
	25	Wulff, B.B.H., et al., "Domain swapping and gene shuffling identify sequences required for induction of an Avr-dependent hypersensitive response by the tomato Cf-4 and Cf-9 proteins," <i>The Plant Cell</i> , 2001 , <i>13</i> , 255-272
	26	Yuan, Q., et al., "Genome sequencing of a 239-kb region of rice chromosome 10L reveals a high frequency of gene duplication and a large chloroplast DNA insertion," <i>Mol. Genet Genomics</i> , 2002 , <i>267</i> , 713-720
	27	Zhao, S., et al., "Mouse BAC ends quality assessment and sequence analyses," <i>Genome Res.</i> , 2001 , <i>11</i> , 1736-1745

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U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
	28	4,801,340	01/31/89	Inoue, et al.	148	103
	29	2003/0221215	11/27/03	Allefs, et al.	800	279

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
	30	WO 99/05903 A1	02/11/99	PCT		
	31	WO 02/38727 A3	05/16/02	PCT		
	32	WO 03/066675 A1	08/14/03	PCT		

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